

2005 Fireworks Report

Washington State Fire Marshal's Office

Mission: To implement a comprehensive and effective educational and enforcement program for fireworks injury prevention and fire safety.

There were 856 fireworks-related injuries and/or fires reported to the State Fire Marshal in 2005 by fire departments and hospital emergency rooms. This is a 23% reduction from the previous year total of 1,110, but a 12% increase over the six-year average of 761. Of the 856 reports received, there were 633 fires, and 223 injuries. These incidents resulted in more than \$1 million in property loss. This data was collected on paper reports from individual fire departments and hospitals and is partially from the National Fire Incident Reporting System (NFIRS) data base.

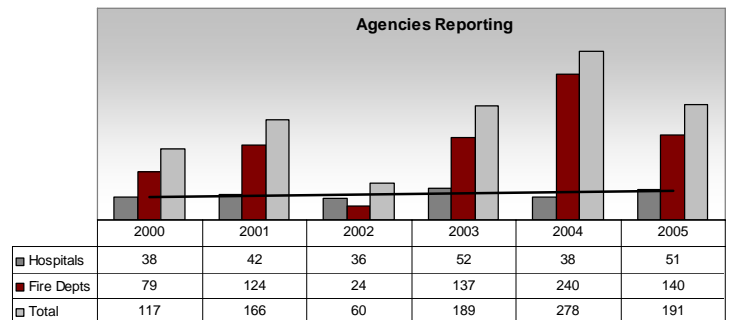
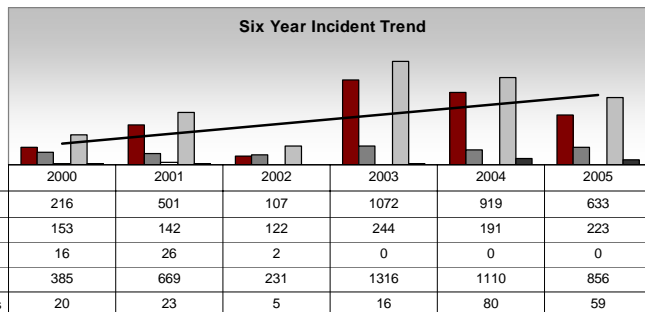


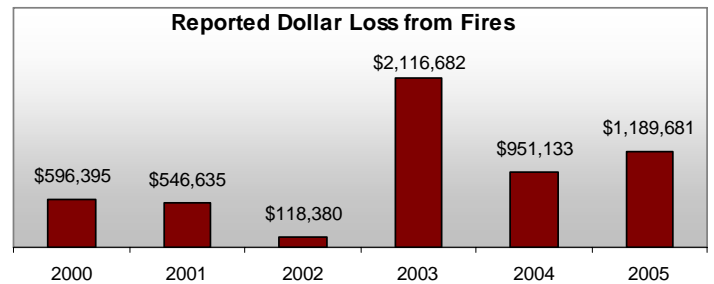
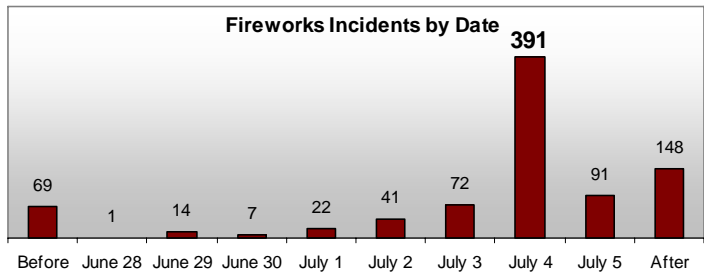
Photo Provided by Vancouver Fire Dept.

Combined Enforcement and Education Campaign Make a Difference in Vancouver

In 2005, the Vancouver Fire and Police Departments collaborated to form eight fireworks enforcement teams. These teams responded to fireworks complaints within the city limits and issued civil infractions for illegal use of fireworks. Patrols were conducted in targeted areas. Fines for unlawful sale, use or possession of fireworks began at \$250.

The fire department distributed 55,000 safety flyers and 30,000 utility bill inserts. Neighborhoods were urged to be considerate, and to observe dates and times for legal use of fireworks. Parents were urged to insure the safety of children by close supervision, and by using only legal fireworks purchased from approved stands. Twelve metal street signs were posted on major roadways showing legal discharge dates.

The results were city parks were cleaner, the city was calmer after curfew and fires were reduced by 34%.



Fireworks-related incidents most often occur on July 4. This has remained constant over the past six years.

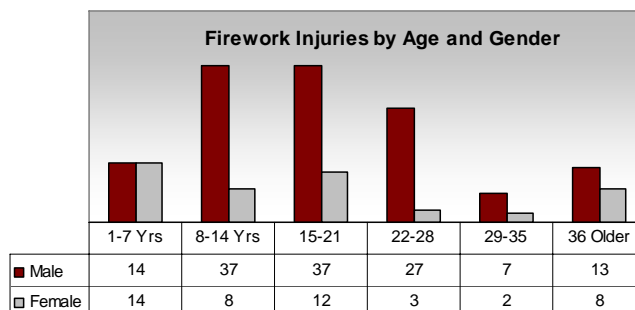
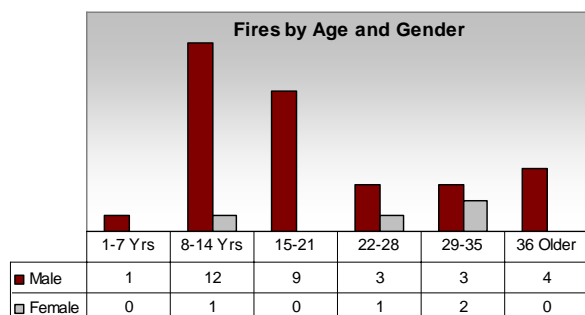
In 2005 fireworks-related fires caused an estimated loss of \$1,189,681. Based on the reports received, illegal fireworks were identified as the cause in 18% of all reported firework related fires and caused \$592,570 in property loss, or 50% of the estimated total loss from fireworks related fires. Legal fireworks were identified in 10% of the reported fires, with a loss of \$60,770 or 5% of the total loss. The type of fireworks was not identified by the reporting fire department in 72% of the fire incidents (Table #1).

Table #1
Fires by Classification of Fireworks Device

Property Type	Dollar Loss				Number of Fires			
	Illegal	Legal	Unidentified	Total	Illegal	Legal	Unknown	Total
Wildland or Vegetation	\$1,920	\$2,670	\$5,675	\$10,265	78	45	152	275
Residential Structure	\$539,550	\$57,500	\$492,796	\$1,089,846	19	7	24	50
Commercial	\$50,300	\$0	\$1,300	\$51,600	5	3	10	18
School	\$300	\$0	\$0	\$300	1		15	16
Vehicle	\$500	\$600	\$36,550	\$37,650	1	1	7	9
Other/Unknown	\$0	\$0	\$20	\$20	10	7	248	265
Grand Total	\$592,570	\$60,770	\$536,341	\$1,189,681	114	63	456	633

Wildland areas are at great risk from fires caused by fireworks. Of the fire incidents reported, 43% resulted in vegetation or wildland fires, with a fire loss of \$10,265, 8% were residential with a fire loss of \$1,089,846 and less than 1% were vehicle fires with a fire loss of \$37,650 (Table #1).

Fireworks-related fires by age and gender (see chart on top of Page 3) clearly shows that male juveniles are causing most (89%) of the fireworks related fires. Fireworks-related injuries by age and gender show that male youth and young adults are most often injured in fireworks related injury incidents. There was no adult supervision in 25% of the incidents where supervision was known and children were involved. According to the Center for Disease Control, children are 11 times more likely to be injured by fireworks if they are unsupervised.¹



The type of injury caused most often was burns at 57%. The next leading injury was trauma at 27%, followed by amputations at less than 2% (Table #2).

Table #2 Injuries by Legal Classification of Fireworks									
Type of Injury					Injury Location				
	Illegal	Legal	Unk	Sub-Total		Illegal	Legal	Unk	Sub-Total
First Degree Burn	17	17	19	53	Arm	3	6	1	10
Second Degree Burn	27	27	11	65	Hand	41	17	13	71
Third Degree Burn	3	3	3	9	Head/Face	33	28	24	85
Trauma	36	15	11	62	Leg/Foot	10	11	7	28
Amputation	6	0	0	6	Torso	7	7	2	16
Unmarked/Unknown	24	1	3	28	Unknown	0	1	12	13
Total	113	63	47	223	Total	94	70	59	223

Table #3 shows the type of fireworks devices that were involved in injury incidents. Illegal fireworks were involved in 113 injury incidents or 50% and legal fireworks were responsible for 63 incidents or 28%.

Of the 63 incidents involving legal devices, sparklers caused 18, or 30% of the incidents followed by roman candles at 16, or 26% and third is multi-aerials at 15, or 25% of the incidents. The remaining miscellaneous fireworks caused 12 or 20% of the incidents. Bottle rockets and firecrackers lead the list of illegal devices causing injuries.

As shown in Table #4, the leading cause of fireworks related injuries is "holding" at 29 incidents, followed by "leaning" at 13 incidents and "delayed ignition" at 12 incidents.

Table #3 Injury by Type of Device			
Legal		Illegal	
Cones and Fountains	5	Altered Fireworks	4
Ground Spinners	2	Bottle Rockets	24
Multi Aerials	15	Cherry Bombs	1
Novelties	4	Firecrackers and Chasers	28
Roman Candles	16	Homemade Explosive Devices	16
Smoke Items	8	M-80's	4
Sparklers	18	M-100's or Larger	1
Total	68	Missiles and Rockets	13
Unknown Device Type	54	Public Display Mortars	10
Total All Devices	223	Total Illegal Devices	101

Table #4 Cause of Injury	
Cause	
Holding	53
Tampering With	22
Throwing	16
Leaning over	10
Duds/Relighting	8
Unsafe Surface	7
Other/Unknown	107
Total	223

A great way to enjoy a fireworks display is to attend a public display produced by trained professionals. Their shows are spectacular and safe. There are over 100 professional displays on July 4 in Washington State, and many other Independence Day activities.

For more information about fireworks safety, public fireworks displays and the fireworks laws for your area, check the Celebrate Safely website at <http://www.wsp.wa.gov/fireworks/default.htm>.

Fireworks Incident Reports Received by County

County	No Incidents to Report	Fire Department			Fire			Hospital	Totals
		Fire	Injury	Total	Fire	Injury	Total	Injury	
Adams	0	0	0	0	1	0	1	0	1
Asotin	0	0	0	0	0	0	0	0	0
Benton	0	12	0	12	1	0	1	1	14
Chelan	2	3	0	3	6	0	6	1	10
Clallam	0	4	0	4	9	1	10	0	14
Clark	1	28	0	28	1	0	1	2	31
Columbia	0	0	0	0	0	0	0	0	0
Cowlitz	1	12	0	12	3	1	4	4	20
Douglas	0	0	0	0	0	0	0	0	0
Ferry	0	0	0	0	0	0	0	1	1
Franklin	1	2	0	2	0	0	0	0	2
Garfield	1	0	0	0	0	0	0	0	0
Grant	5	13	0	13	5	0	5	2	20
Grays Harbor	5	7	0	7	5	0	5	4	16
Island	0	2	0	2	8	0	8	1	11
Jefferson	0	0	0	0	1	0	1	1	2
King	2	117	8	125	60	5	65	44	234
Kitsap	0	9	0	9	13	3	16	6	31
Kittitas	1	2	0	2	1	0	1	1	4
Klickitat	4	4	0	4	1	0	1	1	6
Lewis	6	3	0	3	0	0	0	4	7
Lincoln	5	0	0	0	1	0	1	1	2
Mason	0	4	0	4	0	0	0	1	5
Okanogan	2	1	0	1	4	0	4	0	5
Pacific	1	0	0	0	4	0	4	1	5
Pend Oreille	2	0	0	0	0	0	0	0	0
Pierce	7	61	2	63	31	3	34	23	120
San Juan	0	0	0	0	0	0	0	0	0
Skagit	3	11	0	11	3	0	3	7	21
Skamania	0	1	0	1	0	0	0	0	1
Snohomish	3	19	0	19	46	7	53	30	102
Spokane	2	14	7	21	11	1	12	5	38
Stevens	3	3	0	3	1	0	1	0	4
Thurston	2	11	2	13	10	03	13	6	32
Wahkiakum	0	0	0	0	0	0	0	0	0
Walla Walla	0	9	3	12	1	2	4	4	20
Whatcom	2	0	0	0	3	3	6	11	17
Whitman	0	3	0	3	0	0	0	1	4
Yakima	0	17	2	19	30	0	30	7	56
Grand Total	61	372	24	396	260	29	290	170	856

¹ Center for Disease Control, National Center for Injury Prevention and Control, Fireworks-Related Injuries, April 4, 2006, <http://www.cdc.gov/ncipc/factsheets/fworks.htm>.